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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,298	08/10/2001	Nagaraj Dixit	264/070	4965

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EXAMINER

JONES, STEPHEN E

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 12/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/927,298

Applicant(s)

DIXIT ET AL.

Examiner

Stephen E. Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Alley (of record).

Alley discloses in Fig. 5 an impedance matching circuit for tuning an active device which is disclosed to be an FET (84a), comprising a transmission line (96b) for electrically coupling a radio frequency signal between a source inherently connected to input terminal (8a) and load which is inherently connected to terminal (8b) of the circuit comprising the active device, wherein the length of the transmission line is adjusted to achieve a selected (i.e. impedance) performance characteristic of the device (Col. 9, lines 9-12) as recited by applicant in Claims 1 and 6.

Further note that performance characteristic of a matching circuit inherently includes input loss and output return loss and where a gain (i.e. of the FET) is inherently achieved (Claims 2 and 4).

Also regarding Claim 1, note that the limitation of "wherein the length of the transmission line is adjusted based on a measured performance characteristic of the device" is not given any patentable weight since only the final product is patentable in an apparatus claim. Similarly regarding Claim 5, the limitation of "laser trimming" cannot be given any patentable weight.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 7-10, 12-14, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi (of record) in view of Edward et al.

Cioffi discloses a method of tuning an active device (e.g. 12 in Fig. 1) wherein the method is measuring a performance characteristic of the device (Col. 9, lines 47-49)

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and adjusting the length of the transmission line (Col. 9, lines 33-36) to adjust the performance characteristic (Col. 6, lines 5-6) as recited in Claim 7 and 13. Cioffi further discloses that a performance characteristic is input and output return loss and gain (Col. 9, lines 34-36) and that the active device is an FET (Col. 7, lines 51-56) as recited in Claims 8-10, 12, 14, and 16-18. Note that no patentable weight has been given to the phrase "a power amplifier" as recited in the preamble of Claim 13 because nothing in the body of the claim itself limits itself to that of a power amplifier.

However, Cioffi does not explicitly teach adjusting the length of the transmission line to adjust the measured performance characteristic (Claim 7 and 13).

Edward et al. teaches the steps of calculating, testing (i.e. measuring), and trimming a strip conductor to achieve precise values (see Col. 6, lines 29-42).

It would have been considered obvious to one of ordinary skill in the art to have included the step of measuring/testing the performance characteristics of the line and device before trimming/adjusting (such as taught by Edward et al.) in the Cioffi tuning method, because measuring/testing before trimming provides the advantageous benefit of avoiding unnecessary adjustments when the line already includes the desired characteristics by allowing analysis of the initial characteristics.

6. Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi (of record) and Edward et al. as applied to claims 7 and 13 above, and further in view of Mannerstrale et al. (of record).

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Cioffi and Edward et al. teach a tuning method as described above. However, they do not disclose the limitation of Claims 11 and 15 of “the length of the transmission line is adjusted by laser trimming”.

Mannerstrale et al. teaches in Col. 3 (lines 17-22) that transmission lines can be trimmed by laser (see Col. 6, lines 56-59).

It would have been obvious to one of ordinary skill in the art to have adjusted the length of the transmission lines by laser trimming such as taught by Mannerstrale, because it would have been a well-known art-recognized equivalent means of adjusting a transmission line.

Response to Arguments

7. Applicant's arguments filed 10/21/02 have been fully considered but they are not persuasive.

Regarding Claims 1-6, applicant argues that Alley does not teach adjusting the length of a transmission line based on measured performance characteristics.

This argument is not persuasive because Claims 1-6 are apparatus claims. In an apparatus claim only the final structure is patentable. The step of adjusting cannot be given any patentable weight since there is no structural feature that is part of the final product that would allow for adjusting (e.g. a tuning screw).

Regarding Claims 7 and 13, applicant argues that Cioffi does not teach that the transmission line is adjusted based on measured performance characteristics.

This argument is not convincing since it is well-known to measure characteristics before any adjustments are made to provide data for gauging an adjustment amount. A new rejection is stated above.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Abadeer et al. teaches method for adjusting a transmission line.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 703-305-0390. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 703-308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-6251 for regular communications and 703-308-6251 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

SEJ
December 24, 2002


Justin P. Bettendorf
Primary Examiner
Art Unit 2817